

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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12/5

REC'D 14 MAR 2005

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 21 FEBRUARY 2005 (21.02.2005)

Applicant's or agent's file reference
SH-20775-PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2004/002794

International filing date (day/month/year)

02 NOVEMBER 2004 (02.11.2004)

Priority date(day/month/year)

03 NOVEMBER 2003 (03.11.2003)

International Patent Classification (IPC) or both national classification and IPC

IPC7 H04N 7/24

Applicant

SAMSUNG ELECTRONICS CO., LTD. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application


2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR

 Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2004/002794

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2004/002794

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-22	YES
	Claims		NO
Inventive step (IS)	Claims	1-22	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims		NO

2. Citations and explanations :

Reference is made to the following documents from the International Search Report(ISR):

D1: R. S. Feris, T. E. Campos, R. M. Cesar Jr. "Detection and Tracking of Facial Features in Video Sequences", Lecture Notes on Artificial Intelligence, vol. 1793, pp. 127-135. Proceedings of MICAI-2000, Acapulco, Mexico, April 2000.

D2: Chia-Wen Lin, Yao-Jen Chang, and Yung-Chang Chen, "A low-complexity face-assisted coding scheme for low-bit-rate video telephony", IEICE Trans. Information and Systems, vol. E86-D, no.1, pp.101-108, Jan. 2003.

D3: Muir, L.J., Richardson, I.E.G., Leaper, S., "Gaze Tracking and its Application to Video Coding for Sign Language", Proceedings 23rd International Picture Coding Symposium, St. Malo, France. pp. 321-325, 22-26 April 2003.

Claims 1-22 meet the criteria set out in PCT Article 32(2)-(3), because the prior art under the documents D1-D3 does not teach or fairly suggest the apparatus and the method for applying gaze detection to scalable video coding, characterized by determining a position of an area-of-interest by using gaze detection and selecting a base layer and enhancement layer bitstream of a video object containing the area-of-interest in an input bitstream. That is, while the documents D1-D3 disclose the application of gaze detection to model-based coding, scalable video coding using gaze detection is not specified in the documents D1-D3.

Claims 1-22 meet the criteria of PCT Article 33(4), because the invention can be used as a method and apparatus for scalable video coding.